

detecting foreign particle defects on the substrate transferred to the detecting apparatus;

sending a detected signal from the detecting apparatus to a foreign particle detecting processing apparatus which is separate from the detecting apparatus;

processing the detected signal sent from the detecting apparatus by the foreign particle detecting processing apparatus;

determining a foreign particle generation condition of the processing apparatus based on information processed by the foreign particle detecting processing apparatus;

transferring the substrate detecting in the detecting apparatus to a second processing apparatus in the semiconductor fabrication line; and

processing the substrate in the second processing apparatus, wherein an amount of the foreign particle defects detected in the detecting step is stored in a memory.

4. (amended) A processing method for semiconductor devices in a semiconductor fabrication line, comprising:

processing a substrate in a first processing apparatus;

transferring the substrate processed in the first processing apparatus to a detecting apparatus without removal of the substrate from the semiconductor fabrication line while continuing fabrication of the semiconductor devices;

detecting foreign particle defects on the substrate transferred to the detecting apparatus within a processing time in the step of processing;

sending a detected signal from the detecting apparatus to a foreign particle detecting processing apparatus which is separate from the detecting apparatus;

processing the detected signal sent from the detecting apparatus by the foreign particle detecting processing apparatus;

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storing a data of foreign particle defects detected at the detecting step, and
processed at the processing of the detected signal step in a memory; and
controlling an operation of the semiconductor fabrication line in accordance
with the data of foreign particle defects detected.

6. (amended) A processing method for semiconductor devices in a
semiconductor fabrication line, comprising:
processing a substrate in a first processing apparatus which is a component
of the semiconductor fabrication line;
detecting foreign particle defects on the substrate processed in the first
processing apparatus without removal of the substrate from the semiconductor
fabrication line while continuing fabrication of the semiconductor devices;
sending a detected signal from the detecting apparatus to a foreign particle
detecting processing apparatus which is separate from the detecting apparatus;
processing the detected signal sent from the detecting apparatus by the
foreign particle detecting processing apparatus;
counting an amount of foreign particle defects detected at the detecting step
and processed at the processing of the detected signal step; and
controlling an operation of the semiconductor fabrication line in accordance
with the data of foreign particle defects detected.

8. (amended) A processing method for semiconductor devices in a
semiconductor fabrication line, comprising:
processing a substrate in a processing apparatus which is a component of the
semiconductor fabrication line;

detecting foreign particle defects on the substrate processed in the processing apparatus without removal of the substrate from the semiconductor fabrication line while continuing fabrication of the semiconductor devices;

sending a detected signal from the detecting apparatus to a foreign particle detecting processing apparatus which is separate from the detecting apparatus;

processing the detected signal sent from the detecting apparatus by the foreign particle detecting processing apparatus;

obtaining information of distribution of foreign particle defects on the substrate from the processed detected signal obtained at the step of processing of the detected signal and storing the obtained information in a memory;

wherein the step of detecting foreign particle defects is performed in real time.

10. (amended) A processing method for semiconductor devices in a semiconductor fabrication line, comprising:

processing a substrate in a processing apparatus which is a component of the semiconductor fabrication line;

detecting foreign particle defects on the substrate processed in the processing apparatus without removal of the substrate from the semiconductor fabrication line while continuing fabrication of the semiconductor devices;

sending a detected signal from the detecting apparatus to a foreign particle detecting processing apparatus which is separate from the detecting apparatus;

processing the detected signal sent from the detecting apparatus by the foreign particle detecting processing apparatus; determining a foreign particle generation condition of the processing apparatus using information obtained at the step of processing the detected signal.

12. (amended) A semiconductor processing method, comprising the steps of:

detecting foreign particle defects on a substrate by a foreign particle detection means having a valuable spatial filter to cut a light reflected from a pattern formed on the substrate attached to at least one processing apparatus which is a component of a semiconductor fabricating system;

sending a detected signal from the foreign particle detection means to a foreign particle detecting processing apparatus which is separate from the foreign particle detection means;

determining the foreign particle generating condition of at least one of the at least one processing apparatus.

15. (amended) A semiconductor processing system, comprising:

at least one processing apparatus to process a substrate, the at least one processing apparatus being a component of the semiconductor processing system;

at least one detecting unit which is attached to said at least one processing apparatus and detects foreign particle defects on the substrate;

a foreign particle detecting processing unit which is separate from the at least one detecting unit and receives a detected signal from the at least one detecting unit to process the received detected signal; and

a determining unit to determine a foreign particle generating condition from data of the foreign particle detecting processing unit.

17. (amended) A semiconductor processing system, comprising:

at least one processing apparatus to process a substrate, the at least one processing apparatus being a component of the semiconductor processing system;

a detecting unit which is attached to said at least one processing apparatus and detects foreign particle defects on the substrate with a sensor by cutting a light reflected from a pattern formed on the substrate with a variable spatial filter;

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a foreign particle detecting processing unit which is separate from the detecting unit and receives a detected signal from the detecting unit to process the received detected signal; and

a foreign particle control system which receives foreign particle data processed by the foreign particle detecting processing unit.

20. (amended) A semiconductor processing method comprising the steps of:

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detecting foreign particle defects on a substrate during processing of the substrate in a semiconductor fabrication line by a foreign particle detecting unit attached to one processing apparatus of the semiconductor fabrication line;

sending a detected signal from the foreign particle detecting unit to a foreign particle detecting processing which is separate from the foreign particle detecting unit; and

determining the foreign particle generation condition of the semiconductor fabrication line in accordance with foreign particle processed data.

22. (amended) A semiconductor processing method comprising the steps of:

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processing a substrate with a first processing apparatus which is a component of a semiconductor fabricating system;

transferring the substrate from the first processing apparatus to a foreign particle detection unit attached to the first processing apparatus;

detecting foreign particle defects on a substrate by the foreign particle detection unit having a variable spatial filter to cut a light reflected from a pattern formed on the substrate;

sending a detected signal from the foreign particle detection unit to a foreign particle detection processing which is separate from the foreign particle detection unit; and

transferring the substrate from the foreign particle detection unit to a second processing apparatus which is a component of the semiconductor fabricating system; and

processing the substrate with the second processing apparatus.
